YW

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,207	06/13/2001	Wilhelmus Hendrikus Alfonsus Bruls	PHNL 000345	5320

24737 7590 03/28/2005

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
ROSARIO, DENNIS	
ART UNIT	**PAPER NUMBER**
2621	

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 09/880,207	**Applicant(s)** BRULS ET AL.	
	Examiner Dennis Rosario	**Art Unit** 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *af. amt. 3/3/05*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 June 2004 and 29 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The after final amendment was received on March 3, 2005. Currently claims 1-16 are pending.

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Objections

3. The following quotations of 37 CFR § 1.75(a) is the basis of objection:

> (a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

4. Claims 3,5,6,10 and 13 are objected to under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery.

Claim 3, line 3: "(S)" ought to be amended to "(S_{temp})" for a proper correspondence with "(S_{temp})" of lines 6 and 11 of claim 10.

Claim 5, line 3:"the noise filtering" ought to be amended to "**a** noise filtering".

Claim 6, line 3:"the original pixel value" ought to be amended to "the original pixel value**s**".

Claim 10, lines 4 and 5: "spatially displaced original pixel values (P_t, M_i) in the set of original pixel values (P_t, M_i, P_{t1}, P_{t2})" ought to be amended to "spatially displaced original pixel values (P_t, M_i) in the set of original pixel values **(P_t, M_i)**" and Claim 10, lines 7,8: " in the set of original pixel values (P_t, M_i, P_{t1}, P_{t2})" ought to be amended to "in the set of original pixel values **(P_t, M_i)**".because "(P_t, M_i, P_{t1}, P_{t2})" has no antecedent basis for "the set of original pixel values".

Claim 13, lines 1,2:" wherein filtered temporally displaced pixel values" has no antecedent basis and ought to be amended to" wherein **a plurality of** temporally displaced pixel values".

Response to Arguments

5. Applicant's arguments, see after final amendment, pages 3-6, filed 03/03/2005, with respect to the rejection(s)of claim 1 under De Jonge et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Allred et al. (US Patent 6,310,982 B1).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Allred et al. (US Patent 6,310,982 B1).

8. Regarding claim 15, Allred et al. discloses a device for noise filtering an image sequence (V1), the device comprising the steps of:

a) determining means (Fig. 2,num. 18: Spatial Filter) for determining (11) statistics (Fig. 2,num. 18: Spatial Filter determines statistics or “averages the difference values” in col. 4, lines 64,65 which is represented as “M” in fig. 2.) from a spatial spread (Fig. 2,num. 18: Spatial Filter operating receives difference values, K1-K24 as shown in fig. 2, label “D”, which are spatially arranged as shown in fig. 5a. According to the after final amendment, the spread is based on a difference on page 4, last paragraph. Hence, the values, K1-K24 of fig. 5a and shown in fig. 2, label “D”, are spatial spread or spatial difference values spatially arranged as shown in fig. 5a.) of a set of original pixel values (Fig. 2, label: Xi(t) in an “incoming image frame” in col. 4, line 28 of pixels.) (P_t, M_i) in at least one image (Fig. 2, labels Xi(t) and Xo(t-1) are two images or frames where the spread of difference, ”D”, is generated to determine statistics or the average in fig. 2,num. 18.) of the image sequence (V1) (Fig. 2, label, Xi(t) corresponds to a “current frame”, while Xo(t-1) corresponds to a “previously displayed frame” in col. 5, lines 32-35. Hence, the current frame is of an image sequence.); and

b) filtering means (Figs.1, 2, num. 30 is an output of a filter that calculates.) for calculating (14) at least one filtered pixel value (P_t') (Figs.1, 2, num. 30 calculates a filtered via num. 26: Filter Functions pixel value Xo(t) of fig. 2.) from the set of original pixel values (P_t, M_i) (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels.) obtained (Xi(t) in an incoming image frame or "second frame" in col. 6, line 28 "captur[ed]..." in col. 6, lines 27,28.) from the at least one image (Fig. 2, labels Xi(t) and Xo(t-1) are two images or frames where Xi(t) is captured.), wherein the original pixel values (P_t, M_i) (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels.) are weighted (13) (Fig. 2, num. 38: Weighted Average or Signal Ratios weights the original pixel values Xi(t) via a device of numeral 14, fig. 1 and shown again unlabeled in fig. 2.) under control (12,α) (Fig. 2, num 22: Control controls fig. 2, num. 38: Weighted Average or Signal Ratios, via an arrow between numerals 22 and 38.) of the statistics (11) (Fig. 2,num 22: Control controls fig. 2, num. 38: Weighted Average or Signal Ratios, via an arrow between numerals 22 and 38, using "'M'" in col. 6, line 15 which was "produce[d]" in col. 6, line 15 using the "averages" in col. 4, lines 64,65 also mentioned again as an "average of the pixel difference values" in col. 6, lines 13,14.).

Claim 1 is rejected the same as claim 15. Thus, argument similar to that presented above for claim 15 of a device is equally applicable to the method of claim 1.

Claim 16 is rejected the same as claim 15. Thus, argument similar to that presented above for claim 15 is equally applicable to claim 16 except for the additional limitation disclosed by Allred et al. of:

a) receiving means (fig. 2,num. 34:Memory) for receiving filtered images (X0(t) represents a filtered image from a filter 26: Filter Functions.), wherein the filtered images (Xo(t) of fig. 2) of the image sequence (Xo(t-1) and Xi(t) represent an image sequence to generate the image of Xo(t).) created by a device (Fig. 2 is a device that created the image sequence.) comprising means as disclosed in claim 15.

Regarding claim 2, Allred et al. discloses the method as claimed in claim 1, wherein the step of calculating comprises the steps of:

a) weighting (13) (Fig. 2, num. 38: Weighted Average or Signal Ratios) the set of original pixel values (P_t, M_i) (Fig. 2, num. 38: Weighted Average or Signal Ratios weights the original pixel values Xi(t) via a device of numeral 14, fig. 1 and shown again unlabeled in fig. 2.) under control (12,α) (Fig. 2, num 22: Control controls fig. 2, num. 38: Weighted Average or Signal Ratios, via an arrow between numerals 22 and 38.) of the statistics (11) (Fig. 2,num 22: Control controls fig. 2, num. 38: Weighted Average or Signal Ratios, via an arrow between numerals 22 and 38, using "'M'" in col. 6, line 15 which was "produce[d]" in col. 6, line 15 using the "averages" in col. 4, lines 64,65 also mentioned again as an "average of the pixel difference values" in col. 6, lines 13,14.) to obtain a weighted set of pixel values (P_t, N_i) (The output of fig. 2,num. 38: Weighted Average or Signal Ratios is a weighted set of pixel values.); and

b) furnishing the weighted set of pixel values (P_t, N_i) (The output of fig. 2,num. 38: Weighted Average or Signal Ratios is a weighted set of pixel values.) to a static filter (The output of fig. 2,num. 38: Weighted Average or Signal Ratios is a weighted set of pixel values that is furnished to a static filter shown in fig. 2, num. 26: Filter Functions.), in which the at least one filtered pixel value (P_t') is calculated (Figs.1, 2, num. 30 calculates a filtered via num. 26: Filter Functions pixel value Xo(t) of fig. 2.) from (via numerals 26 and an adder symbol with two plus signs.) the weighted set of pixel values (P_t, N_i) (The output of fig. 2,num. 38: Weighted Average or Signal Ratios is a weighted set of pixel values .).

Regarding claim 3, Allred et al. discloses the method as claimed in claim 1, further comprising:

a) determining a temporal spread [(S)] **(S_{temp})** (Fig. 2, label 14 is shown again unlabeled in fig. 2 determines a difference or spread using time or temporal values "t" for signal Xi(t) and time "t-1" for signal Xo(t-1).) of the set of original pixel values (P_t, M_i) (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels.).

Regarding claim 4, Allred et al. discloses the method as claimed in claim 13, wherein the spread (S) (The values, K1-K24 of fig. 5a and shown in fig. 2, label "D", are a spatial spread or spatial difference values spatially arranged as shown in fig. 5a.) is a sum (An "average" of D in col. 4, line 65 is a sum.) of absolute differences (An "average" of D in col. 4, line 65 is a sum of "difference values" in col. 4, line 65.), a given absolute difference ("difference values" in col. 4, line 65) being obtained (via a round symbol with a plus and minus sign in fig. 2) by subtracting an average pixel value (Fig. 2, label: xo(t-1) is an average pixel value that is based upon a "signal output" in col. 5, line 21 that is "based" in col. 5, line 21 on a signal from fig. 2,num. 18:Spatial Filter as mentioned in col. 5, lines 20-22. Note that fig. 2,num. 18:Spatial Filter generates an "average" in col. 4, line 65 that is used to generate the above mentioned signal output that is used to generate the claimed average pixel value Xo(t).) from (via numerals 18,22,38 and 26 and a circle with two plus signs.) a given original pixel value (P_t, M_i) (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels.).

Regarding claim 5, Allred et al. discloses the method as claimed in claim 1, wherein the set of original pixel values (P_t, M_i) (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels.) include a central pixel value (P_t) (Fig. 5a, label: "X(n)" also referred to as "the pixel of interest" in col. 2, line 40.) and surrounding pixel values (M_i) (fig. 5a, labels: K1-K24), wherein as a result of [the] **a** noise filtering (Fig. 2, num. 26, Filter Functions), the central pixel value (P_t) (Fig. 5a, label: "X(n)") is replaced (as mentioned in col. 2, lines 40-47) by the filtered pixel value (P_t') (Figs.1, 2, num. 30 calculates a filtered via num. 26: Filter Functions pixel value Xo(t) of fig. 2.).

Regarding claim 6, Allred et al. discloses the method as claimed in claim 2, wherein the set of weighted pixel values (P_t, N_i) (The output of fig. 2,num. 38: Weighted Average or Signal Ratios is a weighted set of pixel values.) is obtained by taking ("The control takes" in col. 5, line 4. Note "The control takes" is in error and ought to read, "The weighted average or signal ratios takes", because the related context in col. 5, lines 1-12 is directed towards "The weighted averaging unit 38" in col. 5, line 1.) for each pixel in the set of original pixels (P_t, M_i) (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels as shown in fig. 5a that contains pixel "values surrounding the pixel of interest" in col. 5, lines 6,7.), a combination ("ratio or combination" in col. 5, line 9 of the above mentioned surrounding pixel values and a "pixel of interest" in col. 5, line 8.) of a portion α of the original pixel values (P_t, M_i) (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels and shown in fig. 5a as surrounding pixel values K1-K24.) and a portion 1-α of a central pixel value (P_t) (fig. 5a, label: "X(n)" is the above mentioned pixel of interest.).

Regarding claim 7, Allred et al. discloses the method as claimed in claim 1, wherein the statistics (11) (Fig. 2,num. 18: Spatial Filter determines statistics or "averages the difference values" in col. 4, lines 64,65 which is represented as "M" in fig. 2.) are furnished (via fig. 2, numerals 18 and "M".) to a look-up table (12) ("look up table" in col. 5, line 17 of fig. 2,num. 38.), from which look-up table (12) ("look up table" in col. 5, line 17 of fig. 2,num. 38.) a control signal (α) (An arrow between numerals 22 and 28) is obtained (from fig. 2, num. 22: Control), which control signal (α) (An arrow between numerals 22 and 28) controls the weighting (13) (Fig. 2, num. 38: Weighted Average or Signal Ratios weights the original pixel values Xi(t) via a device of numeral 14, fig. 1 and shown again unlabeled in fig. 2.).

Regarding claim 8, Allred et al. discloses the method as claimed in claim 2, wherein the at least one filtered pixel value (P_t') is obtained by calculating (14) (Figs.1, 2, num. 30 calculates a filtered via num. 26: Filter Functions pixel value Xo(t) of fig. 2.) a median ("pixel of interest" in col. 2, line 43 corresponds to a middle of a square as shown in fig. 5a, label: X(n).) of the weighted set of pixel values (The output of fig. 2,num. 38: Weighted Average or Signal Ratios is a weighted set of pixel values.).

Regarding claim 9, Allred et al. discloses the method as claimed in claim 2, wherein the at least one filtered pixel value (P_t') is obtained by calculating (Figs.1, 2, num. 30: calculates a filtered via num. 26: Filter Functions pixel value Xo(t) of fig. 2.) (14) an average of the weighted set of pixel values (P_t, N_i) (The output of fig. 2,num. 38: Weighted Average or Signal Ratios is a weighted set of pixel values that is inputted to fig. 2,num. 30 as shown in fig. 1 via numeral 26 to generate the filtered pixel value Xo(t) of fig. 2.).

Regarding claim 10, Allred et al. discloses the method as claimed in claim 3, wherein:

a) the spatial spread (S_{spat}) (The values, K1-K24 of fig. 5a and shown in fig. 2, label "D", are spatial spread or spatial difference values spatially arranged as shown in fig. 5a.) is calculated from spatially displaced original pixel values (P_t, M_i) (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels and shown in fig. 5a as surrounding or displaced pixel values K1-K24 that correspond to the signal of Xo(t-1) of fig. 2 that is used to generate "D" or the spread that is spatially arranged using fig. 5a.) in the set of original pixel values [(P_t, M_i, P_{t1}, P_{t2})] **(P_t, M_i)** (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels and shown in fig. 5a as surrounding pixel values K1-K24.); and

b) the temporal spread (S_{temp}) is calculated (Fig. 2, label 14 is shown again unlabeled in fig. 2 calculates a difference or spread using time or temporal values "t" for signal Xi(t) and time "t-1" for signal Xo(t-1).) from temporally displaced original pixel values (P_t, P_{t1}, P_{t2}) (Fig. 2, labels Xi(t) and Xo(t-1) are temporally displaced original pixel values.) in the set of original pixel values [(P_t, M_i, P_{t1}, P_{t2})] **(P_t, M_i)** (Fig. 2, label: Xi(t) in an "incoming image frame" in col. 4, line 28 of pixels in time "(t)" and shown in fig. 5a as surrounding pixel values K1-K24 and X(n).) and

c) weighting (46) (Fig. 2, num. 38: Weighted Average or Signal Ratios)

c1) the spatially displaced original pixel values (P_t, M_i) (Fig. 2, num. 38: Weighted Average or Signal Ratios weighs "surrounding...[values]" in col. 5, lines 4-6 from fig. 2, label: Xi(t) which is an "incoming image frame" in col. 4, line 28 of pixels and shown in fig. 5a as surrounding or displaced pixel values K1-K24 that correspond to the signal of Xo(t-1) of fig. 2 that is used to generate "D" or the spread that is spatially arranged using fig. 5a.) under control (43) (Fig. 2, num. 22: Control controls fig. 2, num. 38: Weighted Average or Signal Ratios, via an arrow between numerals 22 and 38.) of the spatial spread (S_{spat}) (Fig. 2,num 22: Control controls fig. 2, num. 38: Weighted Average or Signal Ratios, via an arrow between numerals 22 and 38, using "'M'" in col. 6, line 15 which was "produce[d]" in col. 6, line 15, via the values, K1-K24 of fig. 5a and shown in fig. 2, label "D", which are spatial spread or spatial difference values spatially arranged as shown in fig. 5a, using the "averages" in col. 4, lines 64,65 also mentioned again as an "average of the pixel difference values" in col. 6, lines 13,14 to produce "M" of fig. 2.) and;

c2) the temporally displaced original pixel values (P_t, P_{t1}, P_{t2}) (Fig. 2, labels Xi(t) and Xo(t-1) are temporally displaced original pixel values that produce a value "D" as shown in fig. 2 that is weighted using fig. 2, num. 38: Weighted Average or Signal Ratios.) under control (44,45) (via the difference value D of fig. 2 or "Pixel Change" of fig. 4a controls the weighting as shown in fig. 4a where labels "1" thru "7" are weights.) of the temporal spread (S_{temp}) (Fig. 2, label 14 is shown again unlabeled in fig. 2 calculates a difference ,"D" as shown in fig. 2 and shown alternatively in fig. 4a as "Pixel Change" as mentioned under "individual pixel differences" in col. 5, lines 61-63, or spread using time or temporal values "t" for signal Xi(t) and time "t-1" for signal Xo(t-1). Note that the above-mentioned individual pixel differences correspond to the difference, D, as shown in fig. 2. Thus, the differences, D, of fig. 2 or "Pixel Change" of fig. 4a determines a weight shown in fig. 4a, labels "1" thru "7" in fig. 2,num. 38: Weighted Average or Signal Ratios under control of the differences, D.).

Regarding claim 11, Allred et al. discloses the method as claimed in claim 10, wherein the weighted temporally displaced original pixel values (P_t, P_{t1}, P_{t2}) (Fig. 2, labels Xi(t) and Xo(t-1) are temporally displaced original pixel values that produce a value “D” as shown in fig. 2 that is weighted using fig. 2, num. 38: Weighted Average or Signal Ratios.) are divided (Fig. 2, labels Xi(t) and Xo(t-1) are temporally displaced original pixel values that produce a value “D” as shown in fig. 2 that is averaged using fig. 2, num. 38: Weighted Average or Signal Ratios. Note that averaging includes a division. Thus, ”D” is divided using an average to obtain an average of “D”.) to lessen their weight in the filtering (47) (Fig. 2,num. 26: Filter Functions).

Regarding claim 12, Allred et al. discloses the method as claimed in claim 10, wherein the temporally displaced original pixel values (Fig. 2, labels Xi(t) and Xo(t-1) are temporally displaced original pixel values that produce a value "D" as shown in fig. 2 that is weighted using fig. 2, num. 38: Weighted Average or Signal Ratios.) include two original pixel values (P_{t1}, P_{t2}) (Fig. 2, labels Xi(t) and Xo(t-1) are temporally displaced original pixel values.) from different fields (The signal Xi(t) represents an "incoming or unfiltered pixel value of the same pixel location in the next frame (col. 2, lines 33,34)", while Xo(t-1) represents "...the initial or filtered pixel value of a pixel in the stored frame...(col. 2, lines 31-33)." Since Xi(t) represents a pixel in a next frame and Xo(t-1) represents a pixel in the stored frame, both pixels are in different fields since they are in different frames.) in a same frame (F_0) (Both pixels are used to generate a "new frame" in col. 2, line 51.) and at least one original pixel value of a previous frame (F_{-1}) (Xo(t-1) represents "...the initial or filtered pixel value of a pixel in the stored frame...(col. 2, lines 31-33)." Where the stored frame is the previous frame in relation to the frame of Xo(t).)

Regarding claim 13, Allred et al. discloses the method as claimed in claim 12, wherein **a plurality of** filtered temporally displaced pixel values (fig. 2, label Xo(t)) are used (via fig. 2,num. 34: Memory) rather than temporally displaced original pixel values (fig. 2, label Xo(t) is a pixel value with time "t" that is displaced in time with respect to a pixel value Xo(t-1) which has a time "t-1" is used via fig. 2,num. 34: Memory rather than temporally displaced original pixel values since a filter, fig. 2,num. 26:Filter Functions filters all pixel values with a time component.).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Allred et al. (US Patent 6,310,982 B1) in view of Kessen et al. (US Patent 5,055,927 A).

Regarding claim 14, Allred et al. teaches a method of encoding (1) an image sequence (V1), comprising the steps of:

a) encoding a plurality of filtered images, wherein the filtered images are obtained by the steps as disclosed by Allred et al. in claim 1. Thus, claims 14 is rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 14 except for the limitation of encoding.

Allred et al. does teach that the signal Xo(t) or "output" in col. 4, line 53 can be used for "other processes" in col. 4, line 54; and

Kessen et al. does teach a process as suggested by Allred et al. of

a) encoding (Fig. 1, num. 2 and 6 receive images.) a plurality of filtered images (Fig. 1 "HDTV" on the left and right ends are the same. Note that HDTV of fig. 1 is produced from a filter 9 of fig. 1. Therefore, the HDTV on the left end of fig. 1 was filtered by filter 9.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Allred et al.'s output with Kessen et al.'s encoding, because Kessen et al.'s encoding "produces a standard...signal" in col. 2, line 38. Thus, Allred et al.'s output can be standardized or compatible with other processes.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is 703-305-5431. The examiner can normally be reached on 6-3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 703-308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DR
Dennis Rosario
Unit 2621

BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600